

REMARKS

Applicants acknowledge allowance of claims 35-40, 45/35, 45/37, 45/40, 46/35, 46/37, 46/40, 47/35, 47/37 and 47/40.

Claims 1-3, 5-20, 22-31, 33, 34, and 41-43 are rejected.

Claims 44, 45/12, 46/12, 47/12 and 48 and 49 are objected to as being dependent upon a rejected base claim(s).

Rejection under 35 USC §102

Claims 1-3, 5, 6, 8-10, 22, 24, 25, 27-28, 41 and 42 are rejected under 35 USC §102(b) as being anticipated by Yoshino (4,975,222). Applicants traverse the rejection.

The invention is directed to a material for detecting ionizing radiation, comprising a π -conjugated material having an electrical resistivity of at least 10^9 ohm-cm (claim 1).

Yoshino discloses a radiation detection material consisting of conductive polymers coupled with radiation sensitive materials that decompose or dissociate upon exposure to radiation and thereby comprise a dopant for the conductive polymers (col. 2, 55-60 and claim 1).

The present invention claims a material for detecting ionizing radiation comprising a π -conjugated material that does not include an added radiation sensitive material that provides a dopant for Yoshino's conductive polymers.

Insofar as Examiner's comment that Applicants have failed to provide structure to support the claimed electrical resistivity, Applicants call Examiner's attention to p. 6, 4-7 of the specification of the invention, wherein Applicants explicitly recite that in order to avoid current leakage problems associated with conventional semiconductor or crystalline radiation detection materials, the materials (i.e., the organic semiconductor materials of the invention) must be characterized by a resistivity typically $>10^9$ ohm-cm.

As Applicants have shown above, Yoshino discloses an invention that is entirely different from that claimed. One that requires the addition

of a dopant precursor in order to function as a radiation detection device. Moreover, by Examiner's admission Yoshino does not disclose the claimed resistivity of at least or greater than 10^9 ohm-cm. Yoshino does not describe the claimed invention so that the public is in possession of it (i.e., the reference does not enable the claimed invention). The rejection is unsupported by the cited reference. Yoshino does not identically disclose the claimed invention as required for a finding of anticipation. There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. A prima facie case of anticipation not having been made Applicants request reconsideration and allowance of claims 1-3, 5, 6, 8, 9, 12-17, 24, 25, 41 and 42.

Insofar as claims 10 and 22 that depend from claim 1, the argument above applies equally here. Applicants therefore, request reconsideration and allowance of claims 10 and 22.

Rejection under 35 USC §103

Claims 7, 18, 26, 29, 33 and 34 are rejected under 35 USC §103(a) as being unpatentable over Yoshino in view of Friend (5,523,555). Applicants traverse the rejection.

Friend is directed to a photo detector device comprising a conjugated polymer material disposed between first and second electrodes having different work functions, i.e., the electrodes are compositionally dissimilar (col. 2, 50-55 and Claim 1).

Rejection is based on the assertion that Yoshino teaches the claimed invention with the exception of polyaromatic hydrocarbons, taught by Friend. Insofar as the combination of Friend and Yoshino, there is neither suggestion in either Friend or Yoshino that they be combined nor any motivation for doing so. Moreover, because Friend and Yoshino are different inventions there is no indication that the combination could be made or would be operative if it could be made. Nowhere does Yoshino suggest that the polyaromatic hydrocarbons of Friend would function in his invention. Finally, even if Friend and

Yoshino could be combined in the manner suggested, the combination would still not have taught the claimed invention

Claims 33 and 34 are rejected as being unpatentable over Yoshino and Friend. Applicants traverse the rejection.

The rejection of claims 33 and 34 is based on the assertion that Yoshino discloses the claimed invention and the incorporation of a metal into the polymer (claim 33). Applicants have shown hereinabove that Yoshino discloses and describes an invention that is entirely different from that claimed namely, that metal salts added by Yoshino are to provide the radiation sensitive materials that decompose under the influence of radiation and generate the substance comprising the dopant of the conductive polymers (col. 3, 15-31). Claims 33 and 34, dependent from base claim 1, stand or fall with base claim 1.

Claims 11, 19, 20, 23, 30, 31 and 43 are rejected as being unpatentable over Yoshino. Applicants traverse the rejection.

Rejection is based on the assertion that Yoshino discloses the invention including the addition of lithium to produce an electrical conductivity of 1.2×10^{-19} s/cm, thereby making the claimed invention obvious. As Applicants have shown Yoshino describes and discloses an entirely different invention from that claimed, consequently, the addition of lithium to Yoshino is moot insofar as rendering the claims obvious.

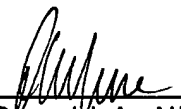
Based on the arguments above, none of the requirements for establishing a prima facie case of obviousness has been met, namely, that all the claim limitations must be taught or suggested by the prior art and that the prior art must disclose the invention as a whole. Accordingly, Applicants request reconsideration and withdrawal of the rejection of claims 7, 11, 18, 19, 20, 23, 26, 29, 30, 31, 33, 34 and 43 under 35 USC §103(a).

CONCLUSION

The rejection of claims 1-3, 5, 6, 8-10, 12-17, 22, 24, 25, 27, 28 and 41-42 under 35 USC §102 and of claims 7, 11, 18, 19, 20, 23, 26, 29, 30, 31, 33, 34 and 43 under 35 USC §103 having been overcome, Applicants request reconsideration and withdrawal of the rejections and that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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Donald A. Nissen
Registration No. 44,261
1025 NW Couch St. #1212
Portland, OR 97209
Telephone (503) 226-8025

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Application No: 09/863,128 For Applicant: Doty